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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,110	09/08/2003	Ho-Jin Ha	1572.1175	7043
21171 7590 09/10/2008 STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			EXAMINER HSU, JONI	
			ART UNIT 2628	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/656,110

**Applicant(s)**

HA, HO-JIN

**Examiner**

JONI HSU

**Art Unit**

2628

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on June 25, 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3, 5-10 and 12-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-10 and 12-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SI/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(c), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(c) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 25, 2008 has been entered.

***Response to Arguments***

2. Applicant's arguments, see p. 6-12, filed May 27, 2008, with respect to the rejection(s) of claim(s) 1-3, 5-10, and 12-15 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Vong (US007030837B1).

3. Applicant argues that Matsuzaki (US 20030145336A1) and Lyle (US007035290B1) do not teach an external apparatus connecting part of a display apparatus that connects to an external apparatus to supply user data to the external apparatus (p. 6). There is no motivation to suggest why both the user data and the video data are transmitted from a computer body to a display apparatus to be output to a display part of the display apparatus and an external apparatus connected to the display apparatus (p. 7). Johnson (US006593972B1) does not suggest that the data decoder is a signal separating part of a control part of a display apparatus that separates extracted digital data into video data and user data such that the user data is able to be output to an external apparatus connected to the display apparatus (p. 10).

In reply, the Examiner has made new grounds of rejection in view of Vong to more clearly teach these limitations.

4. Applicant argues that Hirota (US006865431B1) does not discuss that the flash memory card is a video memory of a computer body that stores user data (p. 8).

In reply, the Examiner points out that Hirota is used to teach that user data stored in the hard disk (31, Fig. 52) is temporarily stored in a memory (3) (*embodiment describes flash memory card, though the invention can be applied to other media including a hard disk*, col. 56, lines 10-13; col. 42, lines 46-56) of a computer body (col. 10, lines 15-18). Since Fallon (US006601104B1) is used to teach that video memory is used to temporarily store data (col. 15, lines 46-58), the combination of Fallon and Hirota teaches that user data is temporarily stored in the video memory.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vong (US007030837B1) in view of Fallon (US006601104B1), further in view of Hirota (US006865431B1).

Vong teaches a computer system comprising: a computer body (200, Fig. 1), comprising: a hard disk to store data (col. 4, lines 32-34), a video processing part (208) to generate video data (col. 5, lines 1-3). Since the video processing part (208) transmits data to the display apparatus that is connected to it (col. 5, lines 1-3), this means that there is a video connector to transmit data. Vong teaches a data transmitting part (330, Fig. 4) to output the video data and the user data through the video connector; and a display apparatus (307) (col. 6, lines 28-31, 49-53), comprising: a display part (324; col. 7, lines 9-10). Since the display apparatus (307) is connected to the computer body (200) and receives video data from the computer body (col. 6, lines 28-31, 49-53), this means that the display apparatus (307) has a body connection part to connect to the video connector of the computer body. Vong teaches an external apparatus connecting part (322) to connect to a MP3 player (col. 6, line 64-col. 7, line 4). Even though Vong does not expressly teach that the external apparatus is an external storage apparatus, it would have been obvious to one of ordinary skill in the art that a MP3 player contains a storage device in order to store received data in order for the MP3 player to use the received data. Since the display apparatus (307) receives the video data and the user data provided from the computer body (200) (col. 6, lines 4-9, 28-31, 49-53), this means that the display apparatus (307) has a data receiving part to receive the video data and the user data provided from the computer body through the body connection part. Vong teaches a control part (316) to display the video data

received through the data receiving part to the display part (col. 7, lines 9-15; col. 6, lines 4-9) and to output the user data to the external storage apparatus connected to the external apparatus connecting part (322) (col. 6, lines 9-23, 64-67; col. 7, lines 1-4), the control part (316) including a signal separating part to separate digital data extracted in the data receiver into the video data and the user data (col. 6, lines 4-23, 64-67; col. 7, lines 1-4, 9-15).

But, Vong does not expressly teach video memory to temporarily store video data generated through video processor, data transmitting part outputs video data temporarily stored in video memory. But, Fallon teaches video memory 1130 to temporarily store video data generated through video processing part 1120, outputting video data temporarily stored in video memory to display (col. 15, lines 46-58).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Vong to include video memory to temporarily store video data generated through video processing part, data transmitting part outputs video data temporarily stored in video memory because Fallon suggests advantage of higher data transfer rates through intermediate data buffering in random access memory (col. 2, lines 32-33; col. 15, lines 28-34, 46-58).

However, Vong and Fallon do not expressly teach video memory temporarily stores user data stored in hard disk, data transmitting part outputs user data temporarily stored in video memory. However, Hirota teaches memory (3, Fig. 52) temporarily stores user data stored in hard disk (31; *embodiment describes flash memory card, though the invention can be applied to other media including a hard disk*, col. 56, lines 10-13; col. 42, lines 46-56; col. 10, lines 15-18), user data temporarily stored in memory (3) is output to display apparatus (5) (col. 41, lines 32-63; col. 37, lines 22-28). Since Fallon is used to teach that video memory is used to temporarily

store data (col. 15, lines 46-58), the combination of Fallon and Hirota teaches that user data is temporarily stored in the video memory.

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Vong and Fallon so video memory also temporarily stores user data stored in hard disk, data transmitting part also outputs user data temporarily stored in video memory as suggested by Hirota. Hirota suggests user data originally stored in hard disk needs to be transmitted to display apparatus so user is able view user data so user is able to make modifications to user data as user desires (col. 41, lines 32-63). Memory for temporary storage, such as RAM, has advantage of being able to be accessed at high speed, and so it is advantageous for user data to be transferred from hard disk to this memory so user data can be accessed at high speed (col. 37, lines 22-28; col. 41, lines 32-63; col. 56, lines 10-13; col. 42, lines 46-56).

8. Claims 2, 3, 5, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vong (US007030837B1), Fallon (US006601104B1), and Hirota (US006865431B1) as relied upon relative to Claim 1, in view of Lyle (US007035290B1).

9. As per Claim 2, Vong, Fallon, and Hirota are relied on for teachings relative to Claim 1.

However, Vong, Fallon, and Hirota do not teach that the data transmitting part and the data receiving part respectively comprises a TMDS (Transition Minimized Differential Signals) transmitter and a TMDS receiver to compress/extract data according to a TMDS-based digital data transmission standard. But, Lyle teaches this (col. 6, lines 3-11; col. 5, lines 63-64; col. 16, lines 14-15, 43-49).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Vong, Fallon, and Hirota so that the data transmitting part and the data receiving part respectively comprises a TMDS (Transition Minimized Differential Signals)

transmitter and a TMDS receiver to compress/extract data according to a TMDS-based digital data transmission standard because Lyle suggests that TMDS links transmit data at high speeds because the data has a reduced or minimized number of transitions (col. 1, lines 16-24, 37-40).

10. As per Claim 3, Vong does not expressly teach video data is provided from video memory. However, Fallon teaches this limitation (col. 15, lines 46-58), as discussed for Claim 1.

However, Vong and Fallon do not teach TMDS transmitter has RGB data output pins, and compresses the user data and the video data in a predetermined ratio to output compressed user and video data through respective RGB data output pins. However, since Lyle teaches that the TMDS transmitter inputs RGB data, and the TMDS receiver receives RGB data from the TMDS transmitter, this means that the TMDS transmitter has RGB data output pins (col. 5, line 58-col. 6, line 2) and compresses the user data and the video data in a predetermined ratio to output compressed user and video data through respective RGB data output pins (col. 5, line 58-col. 6, line 2; col. 16, lines 14-15, 43-49; col. 13, line 66-col. 14, line 16).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Vong and Fallon so TMDS transmitter has RGB data output pins, and compresses the user data and the video data in a predetermined ratio to output compressed user and video data through respective RGB data output pins because Lyle suggests that this is needed in order to encrypt and encode the data according to the TMDS standard for transmission (col. 5, line 58-col. 6, line 2; col. 16, lines 14-15, 43-49), and TMDS links transmit data at high speeds because data has reduced or minimized number of transitions (col. 1, lines 16-24, 37-40).



11. As per Claim 5, Vong does not expressly teach display apparatus has buffer temporarily storing user data received through data receiving part. However, Lyle teaches this limitation (col. 15, lines 1-6; col. 13, line 66-col. 14, line 16).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Vong so display has buffer temporarily storing user data received through data receiving part because Lyle teaches user downloaded data needs to be stored in order for external apparatuses such as MP3 players and information kiosks to receive user data in order for user to be able to use user data to control programs (col. 14, lines 1-16, 48-52; col. 15, lines 1-6).

12. As per Claim 6, Vong does not expressly teach external apparatus connecting part outputs digital signal from data transmitting part to external apparatus via buffer. But, Lyle teaches this (col. 15, lines 1-6; col. 13, line 66-col. 14, line 16). This would be obvious for reasons for Claim 5.

13. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vong (US007030837B1), Fallon (US006601104B1), and Hirota (US006865431B1) as relied upon relative to Claim 1, in view of Charton (US005621792A).

Vong, Fallon, and Hirota are relied on for teachings for Claim 1.

However, Vong, Fallon, and Hirota do not teach computer body has parallel-serial converting part to convert user data to serial data, wherein user data is parallel data. However, Charton teaches this limitation (col. 4, lines 34-43).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Vong, Fallon, and Hirota so computer body has parallel-serial converting

part to convert user data to serial data, wherein user data is parallel data because Charton suggests transmitting user data in serialized format enables optimal picture access mode (col. 4, lines 34-43; col. 2, lines 5-13; col. 18, lines 52-56).

14. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vong (US007030837B1), Fallon (US006601104B1), Hirota (US006865431B1), and Lyle (US007035290B1) as relied upon relative to Claim 2, in view of Charton (US005621792A), further in view of Kato (US006939177B2).

Vong, Fallon, Hirota, and Lyle are relied on for teachings for Claim 2. Hirota teaches outputting user data stored in hard disk to display apparatus, as discussed for Claim 1.

But, Vong, Fallon, Hirota, and Lyle do not teach computer body has parallel-serial converting part to convert user data to serial data, parallel-serial converting part outputs converted serial data. But, Charton teaches this (col. 4, lines 34-43). This would be obvious for reasons for Claim 7.

However, Vong, Fallon, Hirota, Lyle, and Charton do not teach serial data output to display apparatus through predetermined pin of video connector. But, Kato teaches this (col. 1, lines 27-38).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Vong, Fallon, Hirota, Lyle, and Charton so serial data is output to display apparatus through predetermined pin of video connector because Kato suggests data needs to be connected to the right type of pin in order to be transmitted properly (col. 1, lines 27-38).

15. Claims 9 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vong (US007030837B1) in view of Hirota (US006865431B1).

16. As per Claim 9, Vong teaches a data transmitting method of a computer system including a computer body (200, Fig. 1) having a hard disk to store data (col. 4, lines 32-34), a video processing part (208) to generate video data, and a video connector through which the generated video data is outputted (col. 5, lines 1-3); and a display apparatus (307) having a body connection part to be connected to the video connector (col. 6, lines 28-31, 49-53; col. 7, lines 44-47), comprising: providing an external apparatus connecting part (322) in the display apparatus (307) (col. 6, line 64-col. 7, line 4); transmitting data to the display apparatus (307) through the video connector (col. 6, lines 28-31, 49-53; col. 7, lines 44-47); extracting the data and separating the data transmitted to the display apparatus (307) into the video data and the user data; and displaying the video data of a transmitted data as a picture and outputting the user data of the transmitted data to an external storage apparatus connected to the external apparatus connecting part (322) (col. 6, lines 4-23, 64-67; col. 7, lines 1-4, 9-15).

However, Vong does not expressly teach that user data stored on the hard disk is transmitted to the display apparatus. However, Hirota teaches this, as discussed for Claim 1.

17. As per Claim 15, Vong teaches a computer system, comprising: a processing unit including a video processor (308, Fig. 1) to generate video data (col. 5, lines 1-3), a storage unit to store data (col. 4, lines 55-59), and a data transmitter (330, Fig. 4) to transmit the video data and the user data (col. 6, lines 28-31, 49-53); an external storage unit to store the user data (col. 6, line 64-col. 7, line 4); and a display unit (307), which is connected to the processing unit via a video connector (col. 6, lines 28-31, 49-53; col. 7, lines 44-47), and which is connected to external storage unit via external storage unit connector (322) (col. 6, line 64-col. 7, line 4), to separate digital data into video data and user data to display video data and to transmit user data to external storage unit (col. 6, lines 4-23, 64-67; col. 7, lines 1-4, 9-15).

However, Vong does not expressly teach that that user data stored on the storage unit is transmitted to the display apparatus, and the digital data is compressed. However, Hirota teaches that the user data stored on the storage unit is transmitted to the display apparatus, as discussed for Claim 1. The digital data is compressed (col. 2, lines 10-17).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Vong so that digital data is compressed because Hirota suggests that the storage unit has a limited storage capacity, and so it is necessary to compress the digital data (col. 2, lines 10-17).

18. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vong (US007030837B1) in view of Hirota (US006865431B1), further in view of Lyle (US007035290B1).

Claim 10 is similar to Claim 2, and so is rejected under same rationale.

19. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vong (US007030837B1) in view of Hirota (US00685431B1), further in view of Charton (US005621792A), further in view of Kato (US006939177B2).

Vong and Hirota are relied upon for teachings discussed relative to Claim 9.

However, Vong and Hirota do not teach converting the user data to serial data. However, Charton discloses this, as discussed in the rejection for Claim 7.

But, Vong, Hirota, and Charton do not teach setting up predetermined pin of video connector as data transmission pin; transmitting of data comprises outputting serial data to display apparatus through data transmission pin. But, Kato teaches setting up predetermined pin of video connector as data transmission pin; and user data is serial data, wherein transmitting of

data comprises outputting serial data to display apparatus through data transmission pin (col. 1, lines 27-38). This would be obvious for reasons given in rejection for Claim 8.

20. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vong (US007030837B1) in view of Hirota (US00685431B1), further in view of Fallon (US006601104B1).

Claim 13 is similar in scope to Claim 1, and therefore is rejected under same rationale.

21. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vong (US007030837B1) in view of Hirota (US00685431B1), further in view of Charton (US005621792A).

Vong and Hirota are relied upon for the teachings relative to Claim 9.

But, Vong and Hirota do not teach converting user data to serial data, data transmitted is serial data. But, Charton teaches converting user data to serial data, data that is transmitted is video data and serial data (col. 4, lines 34-43; col. 5, lines 41-45). This would be obvious for reasons for Claim 7.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JONI HSU whose telephone number is (571)272-7785. The examiner can normally be reached on M-F 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kee Tung can be reached on 571-272-7794. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2628

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JH

/Joni Hsu/  
Examiner, Art Unit 2628